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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,174	05/10/2001	Johan Cornelis Talstra	NL000262	5915

24737 7590 01/03/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

POLTORAK, PIOTR

ART UNIT PAPER NUMBER

2134

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

E

Office Action Summary	Application No.	Applicant(s)	
	09/853,174	TALSTRA ET AL.	
	Examiner	Art Unit	
	Peter Poltorak	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Responding to the first Office Action applicant amended claim limitations of claims 1, 4, 8-9, 11, 13 16-17 and 19-20 on 5/13/2005 that raised new issues that required further consideration and/or search resulted in the Final Office action forwarded to applicant on 8/01/05.
2. On 10/28/05 applicant's arguments directed towards the Final Office action have been received, considered and in view of the arguments the examiner indicated that applicant's invention was deemed of the prior art.
3. However, upon further review of the art of record it has been discovered that the limitations of claim 1-7 and 10-20 were found in the art of record. The indication of the claim limitations mapped to the art of record is presented below.

Oath/Declaration

4. The examiner acknowledges the receipt of the correct oath/declaration (on 12/06/05).

Specification

5. The examiner acknowledges the receipt of a new Abstract. However, the new Abstract is objected to because of the following informalities: the phrase "should b refused" should read "should be refused".
6. Appropriate correction is required.

Claim Objections

7. Claims 10-12 are objected to because claim 10 is dependent on a claim that has been cancelled and claims 12-12 are rejected by virtue of their dependence. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. Claims 10-12 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.
9. Claims 10-12 seem to further define the limitations of canceled claims 8 and 9. As noted in the last correspondence claims 8-9 were not understood and with the uncertain dependency it is not clear how the limitations of claims 10-12 relate to other claims.
10. For purposes of further examination the limitations of claims 10-12 are treated as best understood.

Claim Rejections - 35 USC § 102

The following is a quotation of 35 U.S.C. 102(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

11. Claims 1-3, 13-20 are rejected under 35 U.S.C. 102(a) as being anticipated by *Bloom et al. (Bloom, J.A.; Cox, I.J.; Kalker, T.; Linnartz, J.-P.M.G.; Miller, M.L.; Traw, "Copy protection for DVD video", C.B.S.Proceedings of the IEEE , Volume: 87 , Issue: 7 , July 1999 Pages:1267 - 1276).*

12. *Bloom et al.*'s invention is directed to copy protection for DVD using watermarking (*Title and an Abstract*). *Bloom et al.* teach that watermarking is a technique for hiding information directly in video (*Bloom et al.*, pg. 1269 col. 1).

13. As per claims 1-3, 13-19 *Bloom et al.*'s teach an embedded watermark within DVD content that reads on a second signal logically embedded in a first signal.

14. *Bloom et al.* teach a wooble with a 64 bits payload in DVD-ROM disks (*Bloom et al.*, pg. 1275 col.1) that reads on a physical mark for storing at least part of the information on the information carrier.

15. *Bloom et al.* teach evaluation of the watermark information and the wooble information and only if the two (*information bits*) match playback is allowed (*Bloom et al.*, pg. 1275, col. 1).

This reads on refusing play back of the information read from the information carrier if the second signal but no physical mark has been detected.

16. Also from the above it is clear that each single (incorrect) bit of the second signal (watermark payload) triggers an action. For example, the single incorrect bit triggers the refusal of the playback. As a result the second signal as disclosed by *Bloom et al.* includes "a single bit trigger".

17. Claims 4-7 are rejected under 35 U.S.C. 103 (a) as being unpatentable over *Glogau et al.* (*International Pub. No. WO 99/11020*) in view of *Bloom et al.* (*Bloom, J.A.; Cox, I.J.; Kalker, T.; Linnartz, J. -P.M.G.; Miller, M.L.; Traw, "Copy protection for DVD video", C.B.S.Proceedings of the IEEE , Volume: 87 , Issue: 7 , July 1999 Pages:1267 - 1276*) and *Wirtz* (*U.S. Patent No. 5940134*).

18. *Glogau et al.* teach the second signal being embedded in the first signal by encoding it in a pseudo-random noise pattern of encrypted and unencrypted packs of the first signal, wherein the encryption sequence generated is based on a linear feedback shift register (*pg. 2 lines 14-17*).
19. *Glogau et al.* do not teach a physical mark used for storing at least part of the information on the information carrier and refusing playback of the information read from the information carrier if the second signal but no physical mark has been detected.
20. *Bloom et al.* teach a physical mark used for storing at least part of the information on the information carrier and refusing playback of the information read from the information carrier if the second signal but no physical mark has been detected as discussed above and *Wirtz* provides a motivation to combine (*Abstract and col. 2 lines 43-47*).
21. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate a physical mark used for storing at least part of the information on the information carrier and refusing playback of the information read from the information carrier if the second signal but no physical mark as taught by *Bloom et al.* in *Glogau et al.*'s invention. One of ordinary skill in the art would have been motivated to perform such a modification in order to ensure that the information preventing an illegal playback of the content are not lost when a disk is copied.
22. *Glogau et al.* in view of *Bloom et al.* do not explicitly teach the linear feedback shift register (*LFSR*) being over Galois Field. However, pseudo-random numbers

generate 1s and 0s, which appear fairly random, but after certain times the numbers repeat, and for the purposes of security the interest is to extend the time of this repeat to as long as possible. The choice of a minimal and irreducible polynomial function (*such as Galois'*) which gives a long time period without the repeat would have been obvious to one of ordinary skill in the art given that they are well known and barring any unexpected results.

23. As per claim 4-7 *Bloom et al.* that the second signal being embedded in the first signal by encoding it in a pseudo-random noise pattern of encrypted and unencrypted packs of the first signal, wherein the encryption sequence generated is based on a linear feedback shift register.
24. *Glogau et al.* teach the second signal being embedded in the first signal by encoding it in a pseudo-random noise pattern of encrypted and unencrypted packs of the first signal, wherein the encryption sequence generated is based on a linear feedback shift register (*pg. 2 lines 14-17*).
25. *Glogau et al.* in view of *Bloom et al.* and *Wirtz* do not explicitly teach the linear feedback shift register (*LFSR*) being over Galois Field. However, pseudo-random numbers generate 1s and 0s, which appear fairly random, but after certain times the numbers repeat, and for the purposes of security the interest is to extend the time of this repeat to as long as possible. The choice of a minimal and irreducible polynomial function (*such as Galois'*) which gives a long time period without the repeat would have been obvious to one of ordinary skill in the art given that they are well known and barring any unexpected results.

26. Claims 10-11 are rejected under 35 U.S.C. 103 (a) as being unpatentable over

Glogau et al. (International Pub. No. WO 99/11020) in view of *Bloom et al. (Bloom, J.A.; Cox, I.J.; Kalker, T.; Linnartz, J. -P.M.G.; Miller, M.L.; Traw, "Copy protection for DVD video", C.B.S.Proceedings of the IEEE , Volume: 87 , Issue: 7 , July 1999 Pages:1267 - 1276)* and *Wirtz (U.S. Patent No. 5940134)*.

27. *Glogau et al., Bloom et al.* and *Wirtz* teach the apparatus as discussed above.

28. As per claim 10 *Glogau et al.* in view of *Bloom et al.* and *Wirtz* do not explicitly teach selecting the key from one of at least two groups of keys.

29. Official Notice is taken that it is old and well-known practice to have more than one key available in a system (*e.g. Taguchi et al., U.S. Patent No. 5915025 teach multiple groups with multiple keys, col. 23 lines 16-29 and Fig. 25*). One of ordinary skill in the art at the time of applicant's invention would have been motivated to employ more than one key in order to provide more flexibility and compatibility for encryption using systems. In the multiple key systems selecting a key from one of at least two groups of keys is implicit.

30. As per claim 11 computers project all information to n-bit numbers (0s and 1s) to accommodate a particular processor used in the computers.

31. As per claim 12 *Glogau et al., Bloom et al.* and *Wirtz* do not explicitly teach that said examining process takes the form of going down a binary tree, where said going left is caused by projection-value 0 and right by projection in value non-zero.

However, Official Notice is taken that it is old and well-known practice to use a binary search, which is one of the most fundamental search techniques (*e.g. Robert*

Sedgewick, "Algorithms", second edition, 1998, ISBN: 0201066734, pg. 198) for motivation of benefit of an efficient searching. Also, in a binary tree going one direction is caused by one projection value and another direction is caused by another projection value. Thus, having an option of selecting 01/ or 1/0 for moving left/right or right/left the binary tree is simply inherent.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571)272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (571) 272-3838. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


12/22/05

David Y. Jung
Primary Examiner

12/23/06
